

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2005/000080

International filing date (day/month/year)
12.01.2005

Priority date (day/month/year)
12.01.2004

International Patent Classification (IPC) or both national classification and IPC
C12Q1/68

Applicant
SOLEXA LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITYInternational application No.
PCT/GB2005/000080

AP20 Rec'd PCT/PTO 07 JUL 2006

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☒ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☒ in written format
☒ in computer readable form
 - c. time of filing/furnishing:
☒ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☒ furnished subsequently to this Authority for the purposes of search.
3. ☒ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. II Priority

1. ☒ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43bis.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	4-31
	No: Claims	1-3
Inventive step (IS)	Yes: Claims	-
	No: Claims	1-31
Industrial applicability (IA)	Yes: Claims	1-31
	No: Claims	-

2. Citations and explanations

see separate sheet

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Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

The following documents are referred to in this communication:

- D1: WO 98/44151 A (GLAXO GROUP LIMITED; KAWASHIMA, ERIC; FARINELLI, LAURENT; MAYER, PASCA) 8 October 1998 (1998-10-08)
- D2: WO 02/061143 A (AMBION, INC; WINKLER, MATTHEW, M; BROWN, DAVID) 8 August 2002 (2002-08-08)
- D3: US-A-5 770 365 (LANE ET AL) 23 June 1998 (1998-06-23)
- D4: US-B1-6 403 319 (LIZARDI PAUL M ET AL) 11 June 2002 (2002-06-11)

1 NOVELTY (Article 33(2) PCT)

- 1.1 A method of sequencing and distinguishing between nucleic acid sequences on an array, which sequences originate from different sources, which method comprises the steps of,
- a) immobilising target nucleic acid sequences from different sources to said array via a capture moiety comprising a functionality capable of effecting immobilisation of said target nucleic acid sequences to said array thereby producing immobilised molecules, each immobilised molecule comprising a target nucleic acid sequence and a nucleic acid sequence tag characteristic of the target nucleic acid sequence source and,
 - b) sequencing said immobilised molecules whereupon said sequencing identifies a sequence of each of the nucleic acid molecules comprising the characteristic nucleic acid sequence tag to identify the corresponding source of the target nucleic acid sequence is disclosed in D1 (cf. cl.1 to 6, 13, 17 to 20, 22, 25, 28 to 34, 42 to 44, 47, p.42, par.3, p.49 to 50, p.59, par.4 to p.63, par.1, Fig.13 and Fig.14) and D2 (cf. cl.1 to 3, 10, 14, 17 to 21, 31, 32, 40, 41, 47, Fig.8 and 9, p.56, par.4 to p.66)
- Therefore, the subject-matter of independent claim 1 is not novel over the prior art (Article 33(2) PCT).

2 INVENTIVE STEP (Article 33(3) PCT)

- 2.1 Dependent claims 2 to 31 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, as all of the additional features fall within the scope of routine laboratory practise (cf. D1, cl.1 to 6,13,17 to 20,22,25,28 to 34,42 to 44,47, p.42, par.3, p.49 to 50, p.59, par.4 to p.63, par.1, Fig.13 and Fig.14, D2, cf. cl.1 to 3,10,14,17 to 21,31,32,40,41,47, Fig.8 and 9, p.56, par.4 to p.66 and D3 and D4 (whole documents)).